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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/649,756
Filing Date: August 26, 2003
Appellant(s): DORENBOSCH ET AL.

Larry G. Brown
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 04/05/2006 appealing from the Office action mailed 12/15/2005.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

This appeal involves claims 1-5, 9-12, 14-16, 18-29, 33, 34 and 39-41.

Claims 17, 30, 35-38 and 42 are allowed.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The rejection the following grouping of claims:

1. Claims 1-5, 9-11, 33, 34 and 40
2. Claims 12, 14-16 and 41
3. Claims 18-19
4. Claims 20-22
5. Claims 23-24
6. Claims 25-29
7. Claim 39

stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

U.S. Pub. No. 2005/0079864	Jonhson et al.	04-2005
U.S. Pub. No. 2003/0119481	Haverinen	06-2003
U.S. Pub. No. 2004/0137902	Chaskar et al.	07-2004
U.S. Pub. No. 2003/0134636	Sundar et al.	07-2003

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 9-12, 14, 15, 25-29, 33, 34 and 39-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson (US-2005/0079864).

Regarding claim 1, Johnson discloses a method (fig. 1 and its description) comprising:

detecting a first signal [0019] from an egress portal [0015], the first signal associated with indicating passage through the egress portal [0019], wherein the egress portal resides within a cell of a wireless local area network and occupies a region that is smaller than the cell (see fig. 1 and [0015]);

initiating, in response to detecting the first signal from the egress portal [0019], a registration sequence with a second wireless communication system [0019]; and

conducting a present or a subsequent call via the wireless communication system [0019].

Regarding claim 2, Johnson discloses the method of claim 1, further comprising:

detecting a second signal from the egress portal [0019]; and

determining, based upon an order of receiving the first the first signal and the second signal, that a wireless device is moving from the coverage area of wireless local area network (described as "private network" see [0014]-[0019]) to a coverage area of the second wireless communications system (described as "public network" see [0014]-[0019]), wherein step of initiating is performed in response to determining that the wireless device is moving from the coverage area of the wireless local area network to a coverage area of the second wireless communications system [0019].

Regarding claim 3, Johnson discloses the method of claim 1, further discloses wherein the second wireless communication system is a wide area network (WAN) (described as "public network" see [0014]-[0019]).

Regarding claim 4, Johnson discloses the method of claim 1, wherein the wireless local area network (WLAN) uses at least one protocol of IEEE Standard 802.11 and Bluetooth (described as "close to the physical entrance of the building" see [0014]-[0019]).

Regarding claim 5, Johnson discloses the method of claim 3, wherein the wide area network (WAN) uses global system for mobile communications (GSM) [0013].

Regarding claim 9, Johnson discloses the method of claim 1, wherein the egress portal comprises a Bluetooth access point (described as "basestations close to the physical entrance of the building" see [0014]-[0019]).

Regarding claim 10, Johnson discloses the method of claim 1, wherein the detecting a first signal is performed (described as "diminishing network signal"; see [0015]-[0019]) in response to detecting a triggering event [0019].

Regarding claim 11, Johnson discloses the method of claim 10, wherein the triggering event comprises at least one of detecting a wireless local area network border cell, detecting a degradation in signal quality, or detecting a start of a call [0019].

Regarding claim 33, Johnson discloses the method according to claim 1, wherein the first signal is only for indicating passage through the egress portal (see [0014]-[0019]).

Regarding claim 34, Johnson discloses the method according to claim 2, wherein the first signal comprises a wireless local area network signal substantially transmitted to an interior side of the egress portal and wherein the second signal comprises a wireless local area network signal ("gateway cell G" see [0015]-[0019]) comprising: substantially transmitted to an exterior side of the egress portal, the second signal being different from the first signal (see [0014]-[0019]).

Regarding claim 40, Johnson discloses the method according to claim 1, further comprising conducting a present or prior call via the wireless local area network [0019].

Regarding claim 12, Johnson discloses a method (fig. 1 and its description) comprising:

detecting a triggering event [0019], the triggering event comprising detecting a wireless local area network border cell (described as "private network" see [0014]-[0019]), wherein the step of detecting a wireless local area network (WLAN) (described as "public network" see [0014]-[0019]) border cell ("gateway cell G" see fig. 1) comprising:

receiving status information from a WLAN access point (described as "basestation" see [0014]-[0019]), wherein the status information comprises a wide area network (WAN) information indicator (described as "increasing macro network signals" see [0014]-[0019]); and

determining that a border cell indicator of the status information ("gateway cell G" see fig. 1) is set ("the public network neighbor cell list" see [0015]-[0019]);

detecting in response to detecting the triggering event a first signal from an electronic device that is located in proximity to an egress portal (see [0015]-[0019]), the first signal associated with indication passage through the egress portal (see [0015]-[0019]);

initiating, in response to detecting the first signal from the electronic device, a registration sequence with a wireless communication system [0019]; and

conducting one of a present and a subsequent call via the wireless communication system [0019].

Regarding claim 14, Johnson discloses the method of claim 12, further comprising:

determining that the WAN information indicator is set ("the public network neighbor cell list" see [0013]-[0019]);

obtaining available WAN information from the WLAN access point (described as "increasing macro network signals" see [0013]-[0019]); and

using the available WAN information to conduct communications with a wide area network [0019].

Regarding claim 15, Johnson discloses the method of claim 14, further discloses wherein the available WAN information comprises service providers, Radio Access Technologies (RAT's), channel information, timing information, or Pilot strength measurements ([0013] and [0019]).

Regarding claim 41, Johnson discloses the method according to claim 12, further comprising conducting a present or prior call via the wireless local area network [0019].

Regarding claim 25, Johnson discloses a computer readable medium (described as "A controller PC"; see [0014-0019]) comprising computer instructions for performing the steps of:

detecting a first signal from an egress portal (fig. 1 and [0015]-[0019]), the first signal associated with indicating passage through the egress portal (fig. 1 and [0015]-[0019]), wherein the egress portal resides within a cell of a wireless local area network and occupies a region that is smaller than the cell (fig. 1 and [0015]);

initiating, in response to detecting the first signal from the egress portal, a registration sequence with a wireless communication system [0019]; and

conducting a present or a subsequent call via the second wireless communication system [0019].

Regarding claim 26 Johnson discloses the computer readable medium (described as "A controller PC"; see [0014-0019]) of claim 25, further comprising computer instructions for:

detecting a second signal from the egress portal (described as "increasing macro network signals" see [0014]-[0019]); and

determining, base upon an order of receiving the first signal and the second signal, that a wireless device is moving from the coverage area of the wireless local area network to the coverage area of a second communications system (fig. 1 and [0015]-[0019]), wherein step of initiating is performed in response to determining that the wireless device is moving from the coverage area of the wireless local area network to the coverage area of the second wireless communications system ([0015]-[0019]).

Regarding claim 27, Johnson discloses the computer readable medium of claim 25, wherein the egress portal comprises a Bluetooth access point (described as "public network" see [0014]-[0019]), an infrared transmitter, or an electronic security detection device.

Regarding claim 28, Johnson discloses the computer readable medium of claim 25, wherein the step of detecting a first signal is performed in response to detecting a triggering event [0019].

Regarding claim 29, Johnson discloses the computer readable medium of claim 28, wherein the triggering event comprises at least one of detecting a wireless local area network border cell, detecting a degradation in signal quality, and detecting a start of a call [0019].

Regarding claim 39, Johnson discloses an egress portal [0015], a method to improve handover behavior of a mobile device between a wireless local area network (WLAN) (described as "private network" see [0014]-[0019]) containing a plurality of WLAN access points (described as "basestations" see [0014]-[0019]) and a wireless wide area network (WAN) (described as "public network" see [0014]-[0019]) containing a plurality of WAN cells (described as "GSM external public network" see [0013]), the egress portal being located at an entry/exit point of the WLAN and not including a WLAN access point or a cell for a WAN [0015], the method comprising:

conducting a call via a first network, the first network being either the WLAN or the WAN (see [0015]-[0019]);

detecting, by the egress portal a movement of the mobile device from a coverage area of the first network to a coverage area of a second network, the second network being the other one of the WLAN or the WAN (see [0015]-[0019]);

in response to detecting the movement of the mobile device, advising the mobile device to switch to the second network (see [0015]-[0019]); and

conducting, in response to advising the mobile device to switch to the second network, the call via the network (see [0015]-[0019]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Haverinen (US-2003/0119481).

Regarding claim 16, Johnson discloses the method according to claim 12. But, Johnson does not particularly show wherein the available WAN information comprises information for at least two wide area networks. However in analogous art, Haverinen teaches "System information related to UMTS networks PLMN is determined in the local network BAN and transmitted 202 to the mobile station MS (information about networks, the authentication services and possibly other services of which can be utilized via the network BAN)" (see [0041]); therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Johnson as taught by Haverinen because "This system information can be broadcast in the access points AP of the local network, and a roaming mobile station MS will therefore receive data on the available UMTS networks in advance" (see Haverinen's specification paragraph [0041]).

Claims 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundar (US-2003/0134636) in view of Chaskar (US-2004/0137902).

Regarding claim 18, Sundar discloses a method comprising: detecting a triggering event ([0069]; also see fig. 8, [0074]-[0079] and fig. 15, [0080]-[0084]); detecting a signal from an egress portal in response to detecting a triggering event, the signal associated with indication passage through the egress portal ([0069]; also see fig. 8, [0074]-[0079] and fig. 15, [0080]-[0084]); obtaining available wide area network information from a wireless local area network access point ([0069]; also see fig. 8, [0074]-[0079] and fig. 15, [0080]-[0084]); and scanning, in response to detecting, for at least one wide area network listed in the available wide area network information ([0069]; also see fig. 8, [0074]-[0079] and fig. 15, [0080]-[0084]).

But, Sundar fails to expressly teach wherein the egress portal resides within a cell of a wireless local area network and occupies a region that is smaller than the cell. However, Chaskar teaches wherein the egress portal resides within a cell of a wireless local area network and occupies a region that is smaller than the cell (fig. 2 and [0045]); therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Sundar as taught by Chaskar for purpose of "deciding initiating a handover procedure between the first and second technology networks based on the detected region information" (see Chaskar's [0022]).

Regarding claim 19, Sundar and Chaskar disclose the method of claim 18.

Chaskar further discloses wherein the triggering event comprises detecting a wireless local area network border cell, detecting a degradation in signal quality, and detecting a start of a call (fig. 2 and [0045]-[0067]).

Regarding claim 20, Sundar discloses a mobile communication device (fig. 7 and [0073]) comprising: at least two transceivers, each transceiver designed to operate on a separate wireless communications system, for transmitting and receiving wireless information (fig. 7 and [0073]); a controller ("computing"), communicatively coupled to each transceiver, for managing the operation of the mobile communication device (fig. 7 and [0073]); a first wireless communications system stack (WLAN), communicatively coupled to the controller, having instructions for communicating according to its respective protocol (fig. 7 and [0073]); a second wireless communications system stack (WWAN), communicatively coupled to the controller, having instructions for communicating according to its respective protocol (fig. 7 and [0073]); a means for receiving signals from an egress portal, the signal associated with indication passage through the egress portal [0073]; and a handover manager ([0069]; also see fig. 8, [0074]-[0079] and fig. 15, [0080]-[0084]), communicatively coupled to the controller, the first wireless communications system stack, the second wireless communications system stack, and the means for receiving signals from an egress portal ([0069]; also see fig. 8, [0074]-[0079] and fig. 15, [0080]-[0084]), the handover manager for determining, in response to determining that the means for receiving signals from an egress portal has received at least one signal from the egress portal indicating passage

therethrough, when to handover from a first wireless communication system to a second wireless communication system ([0069]; also see fig. 8, [0074]-[0079] and fig. 15, [0080]-[0084]).

But, Sundar fails to expressly teach wherein the egress portal resides within a cell of a wireless local area network and occupies a region that is smaller than the cell. However, Chaskar teaches wherein the egress portal resides within a cell of a wireless local area network and occupies a region that is smaller than the cell (fig. 2 and [0045]); therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Sundar as taught by Chaskar for purpose of "deciding initiating a handover procedure between the first and second technology networks based on the detected region information" (see Chaskar's [0022]).

Regarding claim 21, Sundar and Chaskar disclose the mobile communication device of claim 20. Sundar further discloses wherein the at least two transceivers share common hardware and software (fig. 7 and [0073]).

Regarding claim 22, Sundar and Chaskar disclose the mobile communication device of claim 20. Sundar further discloses wherein the means for receiving signals from an egress portal comprises a Bluetooth transceiver, an infrared sensor, or an electronic security detection device (fig. 7 and [0073]).

Regarding claim 23, Sundar discloses a mobile communication system (fig. 5 and its description) comprising:

a structure having at least one entry/exit point ("enter" see [0069]);

at least one egress portal located at the at least one entry/exit point [0069], the egress portal for transmitting signals to a mobile communications device, wherein the signals are associated with indication passage through the egress portal ([0069]; also see fig. 8, [0074]-[0079] and fig. 15, [0080]-[0084]);

at least one cell of a wireless local area network communications system (202), the cell providing communication coverage within the structure [0069]; and

at least one coverage cell of a second communications system (BTS of WWAN), overlapping the at least one cell of the wireless local area network, for providing communication coverage outside the structure ([0069]; also see fig. 8, [0074]-[0079] and fig. 15, [0080]-[0084]);

wherein at least one mobile subscriber device (fig. 7 and [0073]) can be communicatively coupled with the at least one cell of the wireless local area network communications system, and the at least one cell of the second communications system, the device for determining when to handover from one wireless communication system to the second wireless communication system in response to determining that the device has received signals from the at least one egress portal ([0069]; also see fig. 8, [0074]-[0079] and fig. 15, [0080]-[0084]). But, Sundar fails to expressly teach wherein the egress portal resides within a cell of a wireless local area network and occupies a region that is smaller than the cell. However, Chaskar teaches wherein the egress portal

resides within a cell of a wireless local area network and occupies a region that is smaller than the cell (fig. 2 and [0045]); therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Sundar as taught by Chaskar for purpose of "deciding initiating a handover procedure between the first and second technology networks based on the detected region information" (see Chaskar's [0022]).

Regarding claim 24, Sundar and Chaskar disclose the mobile communication system of claim 23. Chaskar further discloses at least one border cell of a wireless local area network communications system, the border cell located at the entry/exit point of the structure, providing a transition region between the wireless local area network communications system and the second communications system (fig. 2 and [0045]-[0067]).

(11) Response to Argument

Appellant's arguments have been considered and are deemed not persuasive for the following reasons.

In response to appellant's argument that "Independent claims 1 and 25 recite the limitation that the egress portal resides within a cell of a WLAN and occupies a region that is smaller than the cell. Johnson simply does not disclose such a feature" (see APPEAL BRIEF page 11). The examiner respectfully disagrees. Johnson discloses "one or more basestations close to the physical entrance of the building in which the

network resides are configured to form one cell called the "gateway cell" G" (see [0015]). The examiner interpreted the base station as the egress portal since the base station provides a radio frequency access point. Johnson further discloses a cell of WLAN network in figure 1 (see [0014]), which contains the egress portal; therefore, the egress portal occupies a region smaller than the cell.

In response to appellant's argument that "Independent claims 1, 12 and 25 recite the limitation that a registration sequence is initiated in response to detecting a first signal from the egress portal or an electronic device located in proximity with the egress portal. Johnson does not describe such a feature" (see APPEAL BRIEF page 12). The examiner respectfully disagrees. Johnson discloses "The network knows to page MS2 here, since the private network will have informed the public network of this at the initial registration procedure, when MS2 was first switched on in the private network" (see [0019]). Since the system switches from the public network to the private network, a signal must be detected from the egress portal/base station in order to follow the registration procedure.

In response to appellant's argument that "Independent claim 39 recites that the movement of the mobile device from a coverage area of the first network to a coverage area of the second network is detected by the egress portal... Johnson never mentions anything about placing the handover agent near an exit or entry point" (see APPEAL BRIEF page 12). The examiner respectfully disagrees, since Johnson clearly discloses "The handover agent HA incorporates a cell planning model in which one or more basestations close to the physical entrance of the building in which the network resides

are configured to form one cell called the "gateway cell" G... the handover agent HA is adapted to detect movement of mobiles from a private cell into the gateway cell G using an algorithm such as diminishing network signals or increasing macro network signals" (see [0015]-[0019]).

In response to applicant's argument about the independent claims 18, 20 and 23 that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "the coverage areas reside within a cell of a WLAN and occupy a region that is smaller than the cell" (see 18, 20 and 23) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claims merely recite the limitation of "the egress portal resides within the cell of the wireless local area network communications system and occupies a region that is smaller than the cell", and do not contain any reference to coverage areas. Therefore, Chaskar discloses "the APs through the coverage of which a mobile user can practically exit (or enter) the hot spot coverage, e.g. an AP providing coverage at the building door" (see [0044]), which reads on the claims. The examiner interpreted the WLAN access point AP (see [0044]) as the egress portal and occupies a region smaller than the cell.

In response to appellant's argument in regard to claims 17 and 30 have been considered and are deemed persuasive (see APPEAL BRIEF pages 13-14).

Conclusion

For the above reasons, it is believed that the rejection is proper, and the Board of Patent Appeals and Interferences is therefore respectfully urged to sustain the Examiner's rejection.

Respectfully submitted,

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